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PSYCHOLOGY OF SPORT AND EXERCISE

The Impact of Achievement Goals on Cheating in Sport

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ABSTRACT

Objective: The purpose of this research was to investigate the impact of achievement goals on cheating in sport.

Designs: We used cross-sectional (Study 1, 3) and experimental (Study 2) designs.

Method: In Study 1 (N = 144) we measured athletes' dispositional goal orientation and attitudes towards cheating. In Study 2 (N =125) we manipulated goal involvement and measured cheating in hypothetical scenarios. In Study 3 (N = 60) we examined the link between goal orientations and cheating in running races.

Results: In Study 1, acceptance of cheating was positively related to ego orientation and negatively related to task orientation. In Study 2, cheating in hypothetical sport situations was more likely for ego-involved and task-involved than control participants. In Study 3, athletes who illegitimately improved their race times to enhance their chances of winning scored higher in ego orientation and lower in task orientation than those who did not illegitimately improve their race times.

Conclusions: The findings provide evidence for the motivation-cheating relationship thereby supporting predictions of achievement goal theory in the context of sport, particularly with respect to ego goals. Our findings suggest that interventions aimed to promote fair play in sport could focus on influencing the goals of the athletes.

Keywords: ego; morality; motivation; task.

The Impact of Achievement Goals on Cheating in Sport

Understanding the factors that lead athletes to cheat while participating in sport is important to individuals and organizations wishing to help create a sport environment characterized by fair play and respect for the rules. Cheating, defined as deceptive behavior intended to break the rules and make illegitimate gains (Reddiford, 1998), has been of interest to sport psychologists for many years. Recently, it has attracted more research attention due to concerns about the increased incidents of high profile cheating scandals over match fixing, illegal betting, equipment tampering, spying, and doping in professional sport (e.g., Kavussanu, 2014; Shields & Bredemeier, 1995). In the current research, we aimed to understand why athletes cheat in the context of sport. For the sake of simplicity, we use the term cheating to refer to the different cheating-related variables that we assessed in our three studies.

Our research was grounded on Nicholls' (1989) achievement goal theory. One of the main tenets of this theory is that individuals participate in achievement contexts, such as sport, to demonstrate competence. The theory contends that there are two major ways that success is defined and competence evaluated, and these are embedded within two achievement goals: task orientation and ego orientation. Task-oriented individuals tend to evaluate competence using self-referenced criteria and feel successful when they master a task, work hard to accomplish a personal goal, or show personal improvement. In contrast, ego-orientated individuals tend to use other-referenced criteria to evaluate their competence and define success as superiority over others. Competence corresponds to effortful accomplishment for high task individuals and superiority over others for high ego individuals.

Achievement goals are hypothesized to differentially influence moral variables. Athletes high in ego orientation should be more likely to engage in behaviors, such as cheating, that

help them accomplish their ultimate goal of winning. As Nicholls (1989, p. 133) stated, "a preoccupation with winning may well be accompanied by a lack of concern about justice and fairness," and "when winning is everything it is worth doing anything to win". In contrast, task-oriented athletes should be less likely to cheat as this would interfere with their goal of achieving a personal best performance; these athletes are more likely to play by the rules and compete fairly (Duda, Olson, & Templin, 1991).

Past research has identified consistent links between goal orientations and a variety of moral variables in sport. Specifically, ego orientation has been associated with endorsement of harmful conduct (Kavussanu & Roberts, 2001), cheating (Goncalves, Silva, Cruz, Torregrosa, & Cumming, 2010; Kavussanu & Ntoumanis, 2003; Kavussanu & Roberts, 2001), doping (Ntoumanis, Ng, Barkoukis, & Backhouse, 2014), antisocial behavior (Kavussanu, Seal, & Phillips, 2006; Sage, Kavussanu, & Duda, 2006) and aggression (Stephens & Breidemeier, 1996), while task orientation has corresponded to high moral functioning (Kavussanu & Ntoumanis, 2003) and prosocial behavior (Kavussanu, 2006). In a recent meta-analysis (Lochbaum, Zazo, Kazak Çetinkalp, Graham, Wright, & Konttinen, 2016), undesirable behaviors (e.g., doping, aggression) were positively correlated (r_w = .23) with ego goal orientation and negatively, albeit weakly, correlated (r_w = –.06) with task goal orientation.

An important limitation of most studies in this area of research is that they have used a cross-sectional design. Although this design can reveal relationships between variables, it does not allow conclusions to be drawn about the direction of causality in the observed relationships. Thus, we do not know whether higher ego and/or lower task goals have led to cheating, or vice versa. To address this limitation, studies employing designs that manipulate achievement goals are needed. The advantage of such designs is that they allow researchers to draw conclusions about which variable causes the other to change. Another limitation of

most studies is that cheating was assessed as a disposition or trait using a questionnaire. Thus, we do not know how athletes would act when competing in sport. This limitation can be addressed using behavioral measures of cheating in sporting competitions.

The purpose of the current research was to examine the role of achievement goals on cheating in sport. To this end, we conducted a survey, an experiment, and a field study, and we assessed cheating using questionnaires, hypothetical scenarios, and head-to-head competitions on the running track. We have described these studies in detail below.

Study 1

The purpose of Study 1 was to examine the relationship between goal orientations and acceptance of cheating and gamesmanship. Previous studies in adolescent athletes have reported mixed findings. Specifically, ego orientation was positively linked to antisocial attitudes (i.e., acceptance of cheating and gamesmanship) in British athletes (Lee, et al., 2008), positively related to cheating and gamesmanship in Portuguese athletes (Gonçalves, et al., 2010), and positively linked with acceptance of cheating and gamesmanship in Italian tennis players (Lucidi, et al., 2017). Lucidi and colleagues also found that task orientation was inversely associated with these variables. In the current study, we investigated the relationship between goal orientations, on the one hand, and cheating and gamesmanship, on the other hand, in British college athletes.

Method

Participants

Participants were male (n = 67) and female (n = 74) college athletes competing in individual (n = 51, 36%) and team (n = 90, 64%) sports at a British university. At the time of data collection, they ranged in age from 18 to 26 years and they had competed in their sport for an average of 7.40 (SD = 4.02) years. Their highest competitive standard in their sport was club (35%), county (29%), regional (16%), national (11%), and international (9%).

Measures

Achievement goals. The Perception of Success Questionnaire (Roberts, Treasure, & Balague, 1998) was used to measure task and ego goal orientations. The stem "In sport I feel most successful when…" was followed by items measuring task (e.g., I work hard) and ego (e.g., I win) goal orientations. Participants responded on a 5-point Likert scale anchored by 1 = *strongly disagree* and 5 = *strongly agree*. Roberts et al (1998) reported evidence on the reliability of the task (α = .88) and ego (α = .88) subscales.

Cheating. The Attitudes to Moral Decision-making in Youth Sport Questionnaire (Lee, Whitehead, & Ntoumanis, 2007) was used to measure acceptance of cheating (e.g., "I would cheat if I thought it would help me win") and gamesmanship (e.g., "I sometimes try to wind up the opposition"). Participants responded on a 7-point Likert scale anchored by 1 = *strongly disagree* and 7 = *strongly agree*. Lee et al (2007) provided support for the reliability of the cheating (α = .73) and gamesmanship (α = .75) scales.

Procedure.

After gaining approval for the study protocol from our university ethics committee, college athletes were recruited from undergraduate sport and exercise science classes. They were informed about the study aims, that participation in the study was voluntary, honesty in responses was vital, and data were confidential and would be used only for research purposes. After consenting, they completed the measures described above.

Results

The descriptive statistics for the variables indicate that, on average, the athletes were characterized by high ego goal orientation (M = 3.96. SD = 0.54), high task goal orientation (M = 4.51, SD = 0.48), low acceptance of cheating (M = 2.78, SD = 1.30), and moderate acceptance of gamesmanship (M = 4.27, SD = 1.29) relative to previous studies (Lee, et al.,

2007; Lochbaum, Kazak Çetinkalp, Graham, Wright, & Zazo, 2016). All measures exhibited good ($\alpha > .70$) internal consistency.

Pearson correlations revealed that acceptance of cheating was positively linked with ego orientation ($r = .20$, $p = .02$) and negatively linked with task orientation ($r = –.21$, $p = .01$). Moreover, acceptance of gamesmanship was positively linked with ego orientation ($r = .22$, $p = .008$) but not significantly associated with task orientation ($r = –.13$, $p = .13$). Correlation coefficients of .10, .30, and .50 correspond to small, medium and large effect sizes, respectively (Cohen, 1992).

Discussion

In line with our hypotheses, the current findings indicate that athletes with permissive attitudes towards cheating were characterized by higher ego and lower task goal orientations, and athletes who endorsed gamesmanship were characterized by higher ego orientation. Previous research has noted similar relations between attitudes towards cheating and task and ego goal orientations (e.g., Lucidi, et al., 2017). These findings are also in line with the results of other cross-sectional research demonstrating that relatively high ego and/or low task orientations correspond to actions such as faking an injury and breaking the rules (Kavussanu & Boardley, 2009; Kavussanu & Ntoumanis, 2003; Kavussanu & Roberts, 2001; Lochbaum, Zazo, et al., 2016).

Study 2

Goal orientations are dispositional tendencies to be task or ego involved in an achievement context. However, the direct regulators of behavior in any achievement context are the achievement goals that are pursued in that context (Nicholls, 1989), which are known as task and ego involvement; individuals high in task or ego orientation tend to be task or ego involved when engaged in achievement pursuits. To date, only two studies have experimentally examined the influence of task and ego achievement goals on cheating.

The first study investigated the effects of goal involvement on cheating in a competitive sport task. Specifically, Sage and Kavussanu (2007), experimentally manipulated task and ego involvement during a table-football competition and observed that participants in the ego-involving group cheated more (cheating was part of the antisocial behavior measure) than those in the task-involving or control groups. Goal involvement was manipulated by presenting participants with a series of slides of words, still images and videos to encourage learning and improving of three skills (task condition), or tips on how to outperform others emphasizing the importance of beating opponents (ego condition). In the control condition, participants were shown slides about the history of table football and associated equipment.

In the second study, Van Yperen, Hamstra, and van der Klauw (2011) manipulated performance (i.e., ego) and mastery (i.e., task) goals before a computerized concentration task, and found that the performance group cheated more than both the mastery and no goal groups. Goal involvement was manipulated by telling participants that their goal was to perform better than most other participants (ego condition) or to improve on the task (task condition). To facilitate adoption of assigned goals, participants were asked to recall and describe a similar situation in about ten sentences, including any associated thoughts and feelings. No specific goal was mentioned in the control condition.

Given the dearth of experimental work in this area of research, in Study 2, we used an experimental design to determine the extent to which achievement goals influence athletes' cheating. Specifically, we used a writing-based manipulation to determine the effects of ego and task goal involvement on cheating in hypothetical situations in sport.

Method

Participants

Participants were male (n = 64) and female (n = 61) college athletes competing in individual (n = 94, 75%) and team (n = 29, 25%) sports at a British university. They ranged in

age from 18 to 24 years and had competed in their respective sport for an average of 8.66 (*SD* = 3.61) years. The highest ever standard at which participants had competed in their sport was club (25%), county (16%), regional (27%), national (22%), and international (10%).

Design and experimental manipulation

We employed a between-subjects design and randomly assigned participants to one of three groups: an ego-involvement group (*n* = 42), a task-involvement group (*n* = 42), or a control group (*n* = 41). We manipulated goal involvement using a writing task. Specifically, both goal groups were presented with a paragraph about the goal of sport and were instructed to recall a situation, where they had personally experienced the same type of goal, take a few moments to think about this situation, and then describe this situation in about ten sentences, including the thoughts and feelings they had experienced. Writing tasks have been used to manipulate psychological states in previous research (e.g., Kavussanu, Stanger, & Ring, 2015; Van Yperen, et al., 2011).

In the ego-involvement group, participants read the following: "It is widely accepted that the most important goal in sport is to compete against and beat your opponents to see who is best. By outperforming your opponents you are able to show that you are clearly superior. By showing other people that you are the best you demonstrate that you are a truly great athlete. The best coaches in the world recommend that you should only evaluate your ability relative to others and that your primary goal should be to outperform others. In sum, the key motivation in sport is to win at any cost".

In the task-involvement group, participants read the following: "It is widely accepted that the most important goal in sport is to work hard and perform to the best of your ability. By mastering something you could not do before you are able to show that you have achieved your personal goals. By showing clear personal improvement and mastery of key skills you demonstrate that you are a truly great athlete. The best coaches in the world

recommend that you should only evaluate your ability relative to yourself and that your primary goal should be to learn, improve, or master what you are doing. In sum, the key motivation in sport is to be the best that you can be".

Participants in the control group read the following: "It is widely accepted that sport is an activity involving physical exertion and skill in which an individual or team competes against another or others. Sport involves many forms of physical activity which, through casual or organized participation, aim to use physical ability and skills. Hundreds of sports exist, from those requiring only two participants, through to those with hundreds of simultaneous participants, either in teams or competing as individuals. In organized sport, records of performance are often kept, and for popular sports, this information may be widely announced or reported in sport news. In addition, sport draws large crowds to venues and reaches wider audiences through sports broadcasting".

Cheating scenarios

Participants were asked to read and imagine that they were in three hypothetical scenarios that involved cheating in sport (see Appendix and Van Yperen et al., 2011). After reading each scenario, the athletes indicated how likely they were to cheat on a scale ranging from 1 = *not at all likely* to 7 = *very likely*. The ratings of cheating likelihood (*r*s = .54 to .67, *p*s < .001; α = .80) were highly correlated and consistent among the three scenarios; therefore, we use the mean responses to the three scenarios as our measure of cheating.

Manipulation checks

We used two manipulation checks. First, participants were shown the stem "The goal of sport is to …" and were asked to rate three ego goal items (i.e., outperform others, beat other people, win at any cost) and three task goal items (i.e., learn a skill, improve a skill, set a new personal best) on a scale, anchored by 1 = *strongly disagree* and 5 = *strongly agree*. The ratings were averaged to yield a measure of ego (α = .73) and task (α = .78) goal

involvement. Second, participants were asked to recall the goal they had been recommended to adopt before reading the cheating scenario, and select one of three options: "to do better than others", "to improve", and "no specific goal was recommended to me" (Van Yperen, et al., 2011).

Procedure

After gaining ethical approval, participants were recruited from undergraduate classes. They were told the study aims, that participation was voluntary, honesty in responses was vital, and data were confidential and would be used only for research purposes. After consenting, they completed the goal-involvement writing task, the read the cheating scenario, and responded to the manipulation checks.

Results

In the analyses reported below, we included gender as a factor, because previous research has documented gender differences in moral variables (e.g., Friesdorf, Conway, & Gawronski, 2015; Kavussanu, & Roberts, 2001; Rosenbaum, Billinger, & Stieglitz, 2014) including cheating (e.g., Whitley, Nelson, & Jones, 1999; Yu, Glanzer, Sriram, Johnson, & Moore, 2017), with males typically displaying lower levels of moral functioning than females. Our analytic strategy is in line with previous research (e.g., Sage & Kavussanu, 2007; van Yperen, et al., 2011's Study 2). Partial eta-squared (η_p^2) values of .02, .13 and .26 or d values of .20, .50 and .80, correspond to small, medium and large effect sizes, respectively (Cohen, 1992).

Manipulation checks

In this section, we report results of the manipulation checks. First, the assigned goal was correctly recalled by 70% of participants. The percentages of athletes endorsing the ego goal (to do better than others), task goal (to improve), and no specific goal were 74%, 19% and 7% in the ego group, 10%, 86% and 5% in the task group, and 14%, 34% and 51% in the

control group, respectively. Second, a 3 Group (ego, task, control) × 2 Gender (male, female) ANOVA yielded a group effect for ego involvement ratings, $F(2, 119) = 4.32$, $p = .01$, $\eta_p^2 = .07$. Tukey's comparisons indicated that the rated ego involvement of the ego group ($M = 3.74$, $SD = 0.73$) was greater than that of both the task group ($M = 3.27$, $SD = 0.73$) and control group ($M = 3.45$, $SD = 0.77$); the latter groups did not differ from each other. Task involvement ratings did not vary among the ego ($M = 4.56$, $SD = 0.51$), task ($M = 4.48$, $SD = 0.51$), and control ($M = 4.41$, $SD = 0.54$) groups, $F(2, 119) = 0.81$, $p = .45$, $\eta_p^2 = .01$. No gender differences were found regarding the effectiveness of the manipulation, Fs(2, 119) = 0.69 – 2.04, ps = .13 – .54, η_p^2s = .01 – .03. These data show that only the ego involvement manipulation was successful.

Effects of achievement goals on cheating

To examine the effects of achievement goals on cheating, a 3 Group (ego, task, control) × 2 Gender (male, female) ANOVA was conducted. This analysis yielded a group effect for cheating likelihood, $F(2, 119) = 4.02$, $p = .02$, $\eta_p^2 = .06$.[1] Follow-up comparisons indicated that cheating likelihood was greater in the ego group ($M = 3.05$, $SD = 1.17$) than the control group ($M = 2.31$, $SD = 1.24$). Cheating did not differ between the ego and task groups. Unexpectedly, cheating was more likely in the task group ($M = 2.86$, $SD = 1.17$) than the control group.

Discussion

The findings of the current experiment provide novel evidence that an ego-involving goal with a *win-at-any-cost* mentality leads athletes to cheat in sport; the effect size was medium (d = 0.61). This finding supports results of a previous experiment, which examined the effects of goal involvement on antisocial behavior, including cheating, in a table-football competition (Sage & Kavussanu, 2007). The finding suggests that if we wish to minimize cheating in sport, we need to focus on tempering ego involvement.

Our data also showed that athletes in the task-involvement group were more likely to cheat than controls; the effect size was medium (d = 0.50). This finding was unexpected, given the null or negative relationships between task orientatin and cheating reported in previous research (e.g., Goncalves, et al., 2010; Lee, et al., 2008; Lucidi, et al., 2017). It is also not in line with the results of two previous experiments which showed no difference in cheating between the task-involved group and the control group (Sage & Kavussanu, 2007; van Yperen et al., 2011). The inconsistency between our study and previous research could be attributed to the unsuccessful manipulation of task involvement.

Study 3

A limitation of Study 2 is that cheating was measured with respect to hypothetical situations rather than in an actual sport setting. To our knowledge, only one study has examined the relationship between achievement goals and cheating using actual cheating behavior in a real-world sport context. Specifically, Lucidi et al (2017) scored cheating behaviors during a competitive tennis match and found that observed cheating behaviors were unrelated to both ego and task orientations. However, their behavioral measures of cheating were not correlated with their questionnaire measures of cheating. Thus, methodological issues pertaining to the scoring methods and/or operational definitions of cheating may explain their null findings. The need exists for field studies that investigate the link between achievement goals and cheating in sport.

In Study 3, we examined the effects of achievement goals on cheating in a competitive race, where the reward for winning was prize money. Some evidence from research on doping indicates that the incidence of cheating is likely to be influenced by the probability of being caught. Specifically, studies have shown that athletes report higher likelihood of doping if the probably of being caught is higher (Huybers & Mazanov, 2012; Ring, Kavussanu, Simms,

& Mazanov, 2018). Therefore, in Study 3, we examined cheating when the chances of being caught were relatively low, medium, and high.

Method

Participants

Participants were male (n = 60) college athletes competing in individual (n = 15, 25%) and team (n = 45, 75%) sports at a British university. Short-distance track athletes (i.e., sprinters) were excluded from the study. Participants ranged in age from 18 to 26 years, and at the time of data collection, they had competed in their respective sport for an average of 8.12 (SD = 4.32) years. The highest ever standard at which the athletes had competed in their sport was club (38%), county/regional (52%), national (3%), and international (7%).

Measures

Achievement goals. The Perception of Success Questionnaire (Roberts, et al., 1998) was used to measure task and ego goal orientations (see Study 1). In the current study, the coefficient alphas of scores on both the task (α = .82) and ego (α = .83) scales were very good.

Procedure

Participants had completed the Perception of Success Questionnaire (Roberts, et al., 1998) in a previous session. They were invited to attend a subsequent testing session at the University of Birmingham's 400 m running track, where they were tested in groups of four. Following a 400 m warm-up jog around the track and stretching exercises, participants were told that the aim of the study was to identify the fastest person at the university and that they should do their best to run as fast as possible. Then, they completed a 60 m timed sprint, which served as their baseline running performance. Next, participants were informed that: they would run three competitive 60-m races; a cash prize of £50 would be awarded to the overall winner of each of the three races; and race times would be adjusted

relative to their baseline performance (which they were given). A handicap system was used to adjust their race times relative to their baseline time to create a fair competition (see Cooke, Kavussanu, McIntyre, & Ring, 2013; Stanne, Johnson, & Johnson, 1999). For instance, someone who ran 10 seconds at baseline, and ran a race in 9.8 seconds, was given a race score of 98%. Thus, participants competed against: their own do-your-best performance; the other three participants in their group; and all other participants in the study.

Before each race, participants were told that without any of their fellow competitors ever knowing, they had the option to increase their chance of winning by cheating and they could have their running time reduced by 3% in the next race: They were given a card on which they were to write *yes* (i.e., cheat by having performance improved) or *no*, and place the folded card in a sealed container; their choice was confidential. The size of the performance enhancement was chosen based on pilot testing. Participants were told that if they chose to enhance their performance, there was a chance of subsequently being caught and disqualified. The probability of being caught after the race was 0.1, 0.5, and 0.9 (i.e., a 10%, 50%, and 90% likelihood of detection and elimination from the competition), with the order of these conditions counterbalanced across participants. After every race, participants were given a 10-15 minute rest to facilitate recovery (Viru, et al., 2010).

Results

Overall, one third of participants (n = 20) opted to cheat by illegitimately enhancing their running performance, at least once. The number (%) of participants cheating in three races, two races, and one race was 2 (3%), 7 (12%), and 11 (18%), respectively. A Cochran Q test confirmed that the probability of being caught influenced cheating, with 17 (28%), 11 (18%), and 3 (5%) participants cheating when the probability of being caught and disqualified equaled 0.1, 0.5, and 0.9, $O(2) = 16.44$, $p < .001$. A series of Wilcoxon Signed Rank Tests indicated that cheating was more likely when the chance of being caught was 10% than both

50%, Z = 1.90, p = .05, and 90%, Z = 3.50, p = .001, and more likely for 50% than 90%, Z = 2.53, p = .01. The current evidence showing that greater probability of being caught was associated with lower cheating likelihood, is compatible with studies showing that the likelihood of doping in hypothetical situations is lower when the probability of being detected is increased (Huybers & Mazanov, 2012; Ring, et al., 2018).

To examine the relationship between goal orientation and cheating, we compared cheats (n = 20) and non-cheats (n = 40) in terms of their ego and task orientations. A 2 Group (cheats, non-cheats) ANOVA indicated that athletes who cheated were more ego oriented than those who did not cheat, $F(1, 58) = 5.79$, $p = .02$, $\eta_p^2 = .09$, ($M_{cheats} = 5.97$, $SD_{cheats} = 0.57$) > $M_{non\text{-}cheats} = 5.40$, $SD_{non\text{-}cheats} = 0.97$), whereas cheats and non-cheats did not differ in task orientation $F(1, 58) = 0.87$, $p = .77$, $\eta_p^2 = .00$, ($M_{cheats} = 6.14$, $SD_{cheats} = 0.72$, $M_{non\text{-}cheats} = 6.09$, $SD_{non\text{-}cheats} = 0.56$).

Discussion

In Study 3, we showed that athletes who cheated in order to improve their chances of winning prize money in a competition had higher ego goal orientation than those who did not cheat; the effect size was small-to-medium ($\eta_p^2 = .09$). These findings support Nicholls' (1989) contention that individuals who are motivated to win at any cost are more likely to behave unethically. Task orientation did not differ between athletes who did and did not choose to improve their performance by cheating. The findings suggest that strengthening task orientation is not likely to influence cheating behavior. This is in line with previous research that has shown that task orientation is primarily associated with positive moral variables, such as prosocial behavior and sportsmanship, whereas ego orientation is the goal most consistently linked with undesirable behaviours in sport (Kavussanu & Stanger, 2017)

General Discussion

In this research program we investigated the impact of achievement goals on cheating in sport, testing predictions based upon Nicholls' (1989) achievement goal theory. In the first study we employed a cross-sectional design to examine the motivation-cheating relationship using self-reported measures of goal orientation, acceptance of cheating, and gamesmanship. In the second study we employed an experimental design to examine the effects of goal involvement on cheating in hypothetical scenarios. In the third study we examined the link between goal orientations and cheating behavior during an actual competition in a field setting.

A consistent finding across the three studies was the medium-sized positive relationship between the ego achievement goal and cheating: ego orientation was positively related to acceptance of cheating and gamesmanship in Study 1; ego involvement increased the likelihood of cheating in Study 2; and ego orientation was greater among cheats during a competition in Study 3. Our findings replicate the results of previous research (e.g., Concalves, et al., 2010; Kavussanu & Ntoumanis, 2003; Kavussanu & Roberts, 2001; Lochbaum, Zazo, et al., 2016; Sage & Kavussanu, 2007) providing further support for the role of ego achievement goal on cheating in sport. The current evidence shows that those athletes who adopted this goal were more likely to cheat.

The relationship between the task achievement goal and cheating was weaker and inconsistent across the three studies: task orientation was negatively related to acceptance of cheating in Study 1; task involvement increased the likelihood of cheating compared to control in Study 2; and task orientation was unrelated to gamesmanship in Study 1 and did not differ between cheats and non-cheats in Study 3. Only the finding from Study 1 replicates the results of previous research (e.g., Duda, et al., 1991; Kavussanu & Ntoumanis, 2003) providing limited support for the thwarting function of the task goal on cheating in sport. Taken together with previous research, this finding shows that promoting task

involvement in sport is unlikely to prevent cheating. Instead it is the focus on ego involvement that appears to make a difference for cheating is sport. This is in line with previous experimental findings.

Contrary to our expectations, relative to control, task involvement increased rather than decreased the likelihood of cheating in hypothetical sporting situations in Study 2. It should be acknowledged that cheating was somewhat, albeit not significantly, less for task involvement than ego involvement. Our unexpected finding, which runs counter to the findings of previous goal involvement experiments that examined cheating, may be explained by methodological differences among the studies. Specifically, our dependent variable was cheating in hypothetical scenarios, whereas the previous studies used observational measures of cheating during a table-football game (Sage & Kavussanu, 2007) and a computer task (van Yperen, et al., 2011). In addition, our goal involvement manipulation was different from previous studies (Sage & Kavussanu, 20007; van Yperen, 2011). Importantly, our manipulation for task involvement was not effective, thus the current result for task involvement should be interpreted with caution.

Research Limitations and Future Research Directions

Our research revealed some important findings, which should be interpreted in light of potential limitations. First, we only used three hypothetical scenarios describing misreporting of performance and tampering with equipment. It is possible that these scenarios were unable to capture the putative thwarting influence of task involvement on cheating. Additional scenarios could be developed and used in research examining the effect of task involvement on cheating in sport. Second, the use of a cash reward in Study 3 might have increased the likelihood of cheating. However, the amount of remuneration was small compared to the prizes that have been associated with use of banned performance enhancing substances, another form of cheating in sport (Huybers & Mazanov, 2012; Ring, et

al., 2018). Future studies could examine whether the effect of goal involvement on cheating is moderated by the magnitude of the financial reward for winning. Third, our participants were college athletes with a broad range of competitive experiences. Research is needed to determine the extent to which our findings generalize to other athletes with different backgrounds and sporting experiences. Fourth, the manipulation checks indicated that the task involvement manipulation in Study 2 was not effective. Thus, the findings regarding task involvement should be interpreted with caution. Future research should explore the effectiveness of alternative manipulations. Finally, given the prominence placed by organizations, such as the IOC and WADA, on moral values embodied in elements of the spirit of sport, researchers should evaluate whether training interventions can be developed that de-emphasize ego goal involvement. Researchers could also examine the role of the motivational climate created by parents on cheating (Wagnsson, Stenling, Gustafsson, & Augustsson, 2016).

Conclusion

Understanding why athletes cheat when competing in sport is an important topic of investigation. The findings of the present studies extend previous literature by showing that the pursuit of ego goals may promote cheating in sport, thereby providing strong empirical support for achievement goal theory (Nicholls, 1989). Our findings have important implications for our understanding of the motivational processes underlying cheating behavior, but also demonstrate that ego goals are worthy of consideration by organizations wishing to reduce cheating by athletes and uphold the spirit of sport.

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Authors' Note

1. This goal involvement effect for cheating likelihood was also found in the sub-sample (n = 88) of participants who correctly recalled their assigned goal, $F(2, 82) = 3.70$ $p = .03$, $\eta p^2 = .08$. Cheating was more likely in the ego group (M = 3.24, SD =1.14) than the control group (M = 2.34, SD =1.16), $d = 0.78$, which represents a large effect size. The amount of cheating by the task group (M = 2.81, SD =1.15) did not differ from the ego and control groups.

Appendix: Scenarios (Van Yperen, et al., 2011)

1. *"In the selection trials for a top team (club), the last test is completing an exercise circuit. You really want to be selected and to achieve this you will have to get the maximal score in the last test, because you know your competitors have already done so. Because of an accident, the coaches are busy elsewhere and you have to record your own score. You just missed out on the required maximal score."* How likely is it that you would record that you obtained the maximal score?
2. *"You have an established place in your team (club). At the moment you are performing below your best and you have not been able to train effectively. Because of this you are in danger of losing your place and being dropped. To keep your place for the upcoming and most important competitive game (event) of the year, your coach demands that your performance must be to your usual standard (i.e., better than you have done in the last couple of weeks). Practically, this means that during the next regular training session, your performance must improve, otherwise your coach will drop you. However, at the end of the training session, you know that you performed even worse than recent weeks. Your coach is on the phone during the performance testing. You have the opportunity to interfere with the timing equipment and make your performance look better without being seen."* How likely is it that you would interfere with the timing equipment?
3. *"You have not made any progress for a while. To remain one of the best athletes in your team (club), you are particularly keen to improve your personal best. By chance, you know that making a minor modification to your equipment would almost guarantee that you do progress. This modification is not approved by the governing body for your sport, and, therefore, you are not allowed to do this. The modification is very difficult to detect, and, therefore, it is highly unlikely that anyone would notice."* How likely is it that you would adjust your equipment?